

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

RECEIVED
OCT - 1 2002
TECHNOLOGY CENTER 2800
#34
10/4/02
2. Prof

-----ooo:O:ooo-----
Application of :
Takahashi YAMANAKA et al. :
Serial No. 09/143,318 : Group Art Unit - 2834
Filed: August 28, 1998 : Examiner - Mark O. Budd
For: ULTRASONIC MOTOR AND :
ELECTRONIC DEVICE :
WITH ULTRASONIC MOTOR : Docket No. S004-3484(CPA)
-----ooo:O:ooo-----

COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

REPLY BRIEF

S I R:

Pursuant to 37 C.F.R. §1.193(b)(1), appellants
present this brief in reply to the Examiner's Answer dated
July 19, 2002.

In the brief on appeal filed April 24, 2002,
appellants presented arguments addressing the single ground of
rejection of claims 1-8 and 10-21 under 35 U.S.C. §103(a)
raised by the Examiner in the final Office Action. In
responding to appellants' arguments, the Examiner has raised
various new points of argument with respect to the prior art

MAILING CERTIFICATE ON
LAST PAGE

RECEIVED
SEP 26 2002
OFFICE OF PETITIONS

Noted
by Examiner
10/7/02

rejections of the claims. These new points of arguments are addressed below.

In the Examiner's Answer, the Examiner pointed out that it would be obvious to break a current path that would otherwise be formed in an ultrasonic motor by using insulation in the claimed manner. The Examiner argued that this would be obvious since the admitted prior art and cited references teach the use of insulation in an ultrasonic motor for different purposes.

Appellants respectfully submit that the Examiner's characterization of the primary issue in this appeal as being the obviousness of using insulation in an ultrasonic motor is erroneous because it overlooks the scope of the claimed invention. The claims do not purport to claim exclusivity in the use of insulation in an ultrasonic motor. The admitted prior art and cited references reveal that the use of insulative components in an ultrasonic motor is well known. The use of insulation is not what appellants have claimed.

To the contrary, the claims narrowly recite a specific configuration for an ultrasonic motor as mounted in an apparatus.

In particular, independent claims 1 and 13 do not merely recite an ultrasonic motor, and do not merely recite an ultrasonic motor having an insulator therein. Claims 1 and 13

explicitly recite a specific configuration for an electrical apparatus having an ultrasonic motor and do not recite the general use of an insulator in an ultrasonic motor.

Independent claims 1 and 13 recite (1) the mounting of an ultrasonic motor to a conductive member of an electrical apparatus through which a power supply current is passed from a power supply to an electrical device; (2) the mounting of the ultrasonic motor to the conductive member such that a current path would exist between the conductive member and an electrode of a piezoelectric element of the ultrasonic motor if the components of the ultrasonic motor were formed of conductive materials; and (3) at least one component of the ultrasonic motor (claim 13) or at least one of the oscillating member, the pressing mechanism and the moving body of the ultrasonic motor (claim 1) which could, if formed of a conductor, provide the current path between the conductive member and the electrode of the piezoelectric element, is formed of an insulating material (or has an insulating coating) to prevent formation of the current path without the need for providing an additional insulator between the conductive member and the ultrasonic motor.

The purported obviousness of merely using an insulating material to form one or more components of an ultrasonic motor does not defeat claims 1 and 13 since it does

not demonstrate that limitations (1) and (2) above would have been obvious. Stated otherwise, the final rejection addresses only limitation (3) since it is directed solely to the obviousness of forming one or more elements of an ultrasonic motor using an insulating material. The final rejection entirely overlooks limitations (1) and (2) of claims 1 and 13 described above. Appellants respectfully submit that claims 1 and 13 are not rendered obvious by prior art references which merely disclose that one or more elements of an ultrasonic motor may be formed of an insulating material. Such a rejection ignores the remaining elements of the claims.

The cited references do not disclose or suggest an electrical apparatus having an ultrasonic motor mounted to a conductive member through which a power supply current is passed. Nor do the cited references disclose or suggest that the ultrasonic motor is mounted to the conductive member such that a current path would exist between the conductive member and an electrode of the piezoelectric element if the components of the ultrasonic motor were formed of conductive materials. There is no disclosure in the references cited by the Examiner that would have suggested the mounting of an ultrasonic motor directly to a conductive member of a device through which a current passes.

As described in the specification and pointed out in appellants' main brief, it has become relatively common to form a mounting plate of a timepiece (to which the movement is mounted) of a conductive material so that the mounting plate can serve as a current path for carrying current from a battery to the timepiece movement. This is done to conserve space and reduce cost. In a prior art timepiece designed in this manner, however, when an ultrasonic motor is to be incorporated into the timepiece for driving a calendar wheel, the motor cannot be directly mounted to the conductive plate because a current path would be formed between the conductive plate and one or more electrodes of the piezoelectric element of the ultrasonic motor. As pointed out in the specification, the incorporation of an ultrasonic motor into the conventional timepiece necessitates redesign of the timepiece because the use of a conductive mounting plate is incompatible with the use of an ultrasonic motor.

Accordingly, steps taken to reduce the size and cost of the timepiece, such as the use of a conductive mounting plate, are rendered ineffectual when an ultrasonic motor is to be incorporated into the timepiece because the mounting plate must be formed of an insulating material to incorporate an ultrasonic motor in the timepiece so that the ultrasonic motor is not short-circuited by current flowing in the conductive mounting plate.

The claimed invention thus addresses a specific problem arising when an ultrasonic motor is mounted to a conductive member of an electronic device where a current path would otherwise exist between a power supply of the electronic device and a piezoelectric element of the ultrasonic motor. Independent claims 1 and 13 recite a structure in which an ultrasonic motor is mounted to a conductive member of an electronic apparatus carrying a power supply current thereof so that a potential current path exists between the power supply of the electronic device and the piezoelectric element of the ultrasonic motor. The claims do not merely recite a generic ultrasonic motor having an element formed of an insulating material. The claims explicitly require a specific configuration which results in the existence of a current path between the power supply for powering the self-oscillating drive circuit and the piezoelectric element of the conventional ultrasonic motor.

The cited references do not disclose or suggest the claimed configuration. The use of insulators in the construction of the ultrasonic motors of the cited references does not suggest the mounting configuration or the construction of the claimed ultrasonic motor.

In light of the arguments and showing made herein and the arguments presented in the main brief, appellants

respectfully submit that the obviousness rejection of claims
1-8 and 10-21 is in error and should not be sustained.

Respectfully submitted,

ADAMS & WILKS
Attorneys for Appellants

By: 

Bruce L. Adams
Reg. No. 25,386

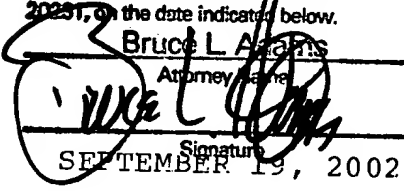
50 Broadway
31st Floor
New York, NY 10004
(212) 809-3700

MAILING CERTIFICATE

I hereby certify that this correspondence
is being deposited with the United States
Postal Service as first-class mail in an
envelope addressed to: Commissioner of
Patents & Trademarks, Washington, D.C.
20251, on the date indicated below.

Bruce L. Adams

Attorney Name


SEPTEMBER 19, 2002

Date